Salmon team members,

I have drafted the following additions to Karl's summary and to other sections of the DEFT Revised Through-Delta Scenario report. These additions are shaded or are highlighted in red depending upon the version retrieved.

Karl's Proposed Rewrite of the Executive Summary

The salmon team evaluated the contribution of the new scenario to in-Delta survival of Sacramento River, San Joaquin River, and Eastside tributaries, as well as the effects of proposed upstream and harvest-management actions. Compared to Alternative 1, the salmon team's assessment of the proposed scenario indicated relatively little change in Delta conditions for Sacramento salmon, and moderate improvements for San Joaquin and Eastside tributaries. Improvements generally were attributed to improved flow distribution in the Delta. Some of these benefits were offset by exposure to the screen at the Hood diversion (Sacramento fish), or detrimental flow conditions resulting from outflow of the Hood diversion (Eastside tributariessalmon). Given the experimental nature of the screen facility at Hood and the potential negative impacts on specific fishery resources, it is imperative that a comprehensive monitoring effort focused on determining the impacts of the Hood screen on Sacramento and Eastside tributary salmon be implemented coincidental with the construction of this facility). Upstream and harvest-management actions, that are the same across all alternatives and the new scenario, provided a larger proportion of total benefits of the CALFED program than Delta actions. The combined evaluation of all components of the CALFED program suggests a moderate probability of achieving program goals for all runs of salmon, with San Joaquin fall run having slightly less probability of successful restoration than the other runs."

Structural Changes

3. A new Hood Diversion Demonstration/Testing Facility on the Sacramento River capable of diverting up to 2,000 cfs from the Sacramento River to the Mokelumne~~River~~. The facility would have an alignment as defined for Alternatives 2 and 3, so that those options would not be precluded in the future. Screen operation would be under criteria established by NMFS, FWS, and DFG. A comprehensive monitoring program to address the potential negative impacts identified below needs to be implemented coincidentally with the operation of the test facility.The facility would be operated for the following purposes:

I. Test screening efficiency, cleaning, and bypass mechanisms.

Ii. Test upstream passage mechanisms.

Iii. Test impacts on migration through the delta.

Iv. Enable closing the Delta Cross Channel without compromising interior Delta water quality.

V. Improve Delta water quality.

Vi. Improve cues for migrating fish.

This action also has some potential negative effects:

- Exposes young salmon to new screen system.
- May impair cues of migrating fish.
- May block or impair upstream passage of migrating fish.
- Depending upon the location of the conveyance to the Mokelumne, may create flow conditions that would increase the exposure of Eastside tributary (Mokelumne) salmon to the export pumps.

8. Modify flow volumes, distributions, frequency, and pathways.

This action also has some potential negative effects.

- Impacts (such as water temperature) may shift to other species or life stages either in-Delta or upstream.
- May locally impact water quality.
- May force salmon fry out of the tributaries.
- May attract striped bass into the salmon fry upstream rearing habitat.

Salmon Team Evaluation

The salmon team concluded that the new scenario offered significant improvements over Alternatives 1 and 2. The San Joaquin chinook salmon populations would gain significantly from the extended VAMP, improved QWEST, Head-of-Old-River barrier, new south Delta fish facilities, lower exports, and improved Delta outflows. The Sacramento salmon populations would benefit from these same features, but would also be subjected to lower Sacramento flows, exposure to the new screen system, and the potential for delays in adult upstream migration from exposure to the new screen system, and the potential for delays in adult upstream migration from straying up behind the screen. Eastside tributary salmon would benefit from new South Delta fish facilities, lower exports, and improved Delta outflows. These benefits would be partially offset by the Head-of-Old-River barrier and adverse flow patterns below the Mokelumne South Fork that would expose more fish to the export pumps. Despite these potential effects the team concluded that the scenario with the Common Program would likely contribute significantly to the recovery of the Sacramento salmon populations. Despite significant improvement to the San Joaquin populations chances for recovery, the team was less optimistic for chances of recovery ~~that~~ than for the Sacramento and Eastside tributary populations, because of continuing exports from the south Delta and uncertainty of habitat conditions in the San Joaquin River and its tributaries.

5. ADDRESSING PRIMARY QUESTIONS

SALMON TEAM

- A much smaller portion of Sacramento chinook are affected by diversions from the south Delta than San Joaquin chinook salmon or Eastside tributary salmon. The new scenario addressed this point by focusing slightly more on improving conditions for San Joaquin and East Side tributary salmon populations.

- Substantial negative effects exist for Sacramento, San Joaquin salmon and Eastside tributary salmon under existing conditions, and those would persist under No Action and alternative 1, although direct entrainment losses would be reduced by a small increment under alternative 1. The new scenario aggressively attacks existing negative effects with new screen systems at export pumps, reduced winter exports, and higher flows.

- Under alternatives 2 and 3, the entire population of Sacramento chinook would emigrate past a screened diversion at Hood, and would be exposed to flow reductions in the Sacramento River downstream of Hood. The new scenario greatly reduces the diversion at Hood and the degree flows would be altered below Hood in the Sacramento River.

- Adverse effects unique to alternative 2 would be increased straying and migratory delay of adult salmon returning to the Sacramento basin, due to both attraction to the Modelumne River portion of the Delta and exposure to a fish passage facility at the Hood diversion. Flows from the Hood diversion under alternative 2 would have the potential to divert more fish from the Eastside tributaries toward the export pumps, especially through the Mokelumne South fork and Little Potato and Connection Sloughs. The new scenario would scale down the Hood diversion, but not eliminate this concern. The benefit of screening to juvenile Sacramento River salmon far outweight the potential effects to adult salmon.

- Delta Cross Channel gate closure to improve survival of salmon emigrating down the Sacramento River would continue to be in conflict with water quality objectives during low flow periods. Including the small scale Hood diversion in the new scenario assures the water quality conflicts would not inhibit closure of the DCC when needed to protect fish. For the Eastside tributaries, it will be important to locate the conveyance from the small scale diversion at Hood so it does not force more salmon into the Mokelumne South fork where they would be more vulnerable to entrainment at the export pumps.